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IN THREE SECTIONS

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EDITORIAL DEPARTMENT NOTE

The jewelry industry, along with many others, has been showing an unsatisfactory profit condition in recent years. One of the chief reasons for this is a widespread neglect of consideration of several cost items. In this issue of our Bulletin we are submitting a paper the purpose of which is to discuss some of the principles involved in an adequate control of costs incurred by the manufacturing jeweler. This paper is based on a report made by a Survey Committee of the New England Manufacturing Jewelers' and Silversmiths' Association. The committee consisted of the following men: James V. Toner, Chairman; Lawrence E. Baer, Frederick A. Ballou, Jr., Harvey E. Clap, Edgar M. Docherty, Charles C. Foster, Stephen H. Garner, Wallace D. Kenyon, Harold E. Sweet, Edward O. Otis, Jr.

Mr. James V. Toner, the author of this paper, holds the college degrees of M.A. and B.B.A. He is a Certified Public Accountant and is the author of several books on accounting. He is a Professor of Accounting at Boston University, principal partner in the accounting firm of James V. Toner & Company and is President and Treasurer of the Saart Bros. Company, Attleboro, Mass. This paper was prepared for and submitted by our Boston Chapter.

The second paper in this issue of our Bulletin will bring to the attention of our members a very important accounting problem, that of speeding up the preparation of financial statements. If the management of a business is to make the best use of the information which its accounting department furnishes it, this information must be made available promptly and in such form that the management can interpret it and use it in the formulation of current policies. The only way such information can be furnished accurately and promptly is through a well-trained and efficient accounting department, well organized to handle the necessary information furnished by the cooperating department heads. This paper is an outline of a plan in actual operation which is accomplishing the desired purposes. Mr. William B. Knuff, the author of this paper, was employed as an accountant with the United States Steel Corporation from 1897 to 1913. From 1913 to 1918 he was employed with the Corrigan, McKinney Company as cost accountant, and since 1918 he has been employed with the Central Alloy Steel Company, where he is now the chief cost accountant. Mr. Knuff has delivered addresses before several of our chapters. He delivered this paper before the Cleveland Chapter of which he is a member.

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COST ACCOUNTANTS

DECEMBER 1, 1932

PROFIT CONTROL FOR MANUFACTURING JEWELERS AND SILVERSMITHS

By James V. Toner,
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IN 1931 the United States Bureau of Foreign and Domestic Commerce made available to manufacturing jewelers the results of a survey of the medium and low-priced jewelry industry. This survey showed unsatisfactory profit conditions in the industry to a considerable extent traceable to poor cost control. There was a widespread neglect to give adequate consideration to a number of cost items. Among these were losses on bad accounts, taxes, price concessions, extra terms, extra discounts, catalogues, repair work not charged to the customer, and small orders. If profits are to be improved in this industry, the first requisite would therefore seem to be better cost control. It is the purpose of this paper to outline some of the principles involved in such a system of control.

An almost unbelievable lack of records existed throughout the industry. Less than twenty per cent of the manufacturers kept records of the quantities of each item sold. The cost of keeping records of quantities is almost negligible and the information derived from such records is basic to sound production policy. Without records of quantities sold, decisions as to the profitableness of individual items or lines are based on guesswork and there is no sound basis for planning production or for anticipating customers' demands. At present an important loss from obsolete goods and job lots is traceable directly to this condition. It would seem a foregone conclusion that the lines can be simplified and reduced without great loss in sales volume and with a considerable decrease in the investment in sample lines and in the money spent for development.

The first step in determining costs is the selection of a proper costing unit. Considerable care should be used in selecting this unit. Consideration must be given to a number of factors, among which are the nature of the product manufactured, the method of

factory production, whether to customer's order or for stock, and probable quantity to be ordered by customers on individual orders. If goods are manufactured for stock, the set-up cost of dies, tools and jigs, will determine to some extent the minimum quantity which can be manufactured if set-up costs are to be absorbed without necessity of ridiculously high prices. It would seem that the ideal basis would be the quantity which corresponds most closely with the normal quantity order. This is particularly true since the products of the jewelry industry are not staple and necessitate a constant careful correlation of orders and product if excessive inventories and consequent losses traceable to obsolescence of style goods are not to result. The use of the normal quantity as a basis for costing relates the selling price to actual conditions and permits price adjustment for orders involving exceptional quantities, either high or low. Apparently very few manufacturers in the industry have an idea as to the minimum quantity which can be manufactured at a profit. Additional charges for quantities less than the normal order are almost nonexistent. This condition is undoubtedly an important cause of loss. Basic costing quantities in actual use vary from a single unit to a gross.

The first principle of costing is to charge directly to the function, department or product benefited, every cost and to prorate costs only as a last resort. Arbitrary prorations introduce inaccuracies and prevent the placing of responsibility for results. The number of prorations necessary make costing at best an estimate. Every effort should be made to charge the product with all actual and determinable elements of cost. This applies not only to material and labor but also to supplies and so-called burden items. Stated another way, every item entering into the cost of a product where that cost is determinable for each unit of product, should be charged directly to the product and thus be kept out of the general manufacturing overhead.

Materials should be charged directly to the product through the use of requisitions. The material problem in general presents an easy cost problem. There are, however, a few special questions arising in connection with the handling of material costs of manufacturing jewelers. The first of these has to do with the price at

which material should be charged into product. The price of gold is of course uniform at all times. The prices of other metals have been subject to extreme variations during the last few years. Silver and platinum in particular have shown almost unbelievable declines from their earlier and supposedly normal prices. The present levels of prices of many of the raw materials used by manufacturing jewelers suggest the possibility of equally rapid increases in prices in the near future. Under these circumstances, it is a real problem to determine the price at which materials should be charged to the product. Alternatives are current market prices, cost prices (which may be either higher or lower than market) and normal prices, which are considered by many to be considerably above present levels. Unless the manufacturer hedges on his metal purchases, and that is not common in the jewelry business, it is not safe to use current market prices for cost purposes in the case of products which may not be sold until a year from now. The only safe rule is to use a normal price from the material and if it is deemed expedient to adjust the resulting price it may be accomplished by a discount which may be eliminated if later price conditions justify it. It is always easy to lower a price but difficult to raise one. In costing material the use of normal price or prevailing market price, whichever is the higher, will insure that the price be high enough to cover material and will permit an adjustment down (rather than up) if such an adjustment is necessary.

A second problem arising in connection with material is the treatment of scrap and refinings. In the case of precious metals the value of these may be considerable in amount. The best practice would seem to be to credit scrap to the product at market price. Refinings are less important than scrap and except in the case of pure precious metals, are insignificant in relation to total material cost. Although it is possible to subtract recovery from refinings from material cost, it would seem to be equally good practice to consider it as an item of income since the cost of allocating the amounts recovered to individual products is likely to be high in relation to the value of the information.

The cost of cards, boxes and display cases is an important item in the jewelry business. It is debatable whether such cost is a part of the "cost to make" or "cost to sell." In either case the cost of

these items is determinable for each unit of product and should be charged to the product rather than included in overhead. The manufacturer is entitled to recover through selling prices not only the cost of these items but also a reasonable return on his investment. Some manufacturers have omitted display cases from both the cost to make and the cost to sell and have treated them as additions to selling price. The effect of this is to prevent the manufacturer from earning a return on the cost of such cases. The policy has usually been justified on the ground that such cases help to sell the goods and that the manufacturer is compensated for his efforts through his manufacturing and distributing profit. It should be pointed out, however, that there is considerable danger that the manufacturer will be misled by such practice if he sells on a commission or a bonus arrangement. If such commission or bonus is based on selling price, the manufacturer will be paying a commission on these cases which he has included at cost without the addition of a margin to cover expenses. Thus in one case, a manufacturer cased goods which cost to make and sell $2.10 in a $.90 box and set a selling price on the article of $3. He paid a selling commission of 12.5% and allowed a discount of 6%, both based on selling price. These discounts totaled $.555 and of these amounts a little over $.21 represented commission and discount on the $.90 display box and was an absolute loss. If the manufacturer continues to follow a policy of including display cases at cost, discounts and commissions should be based upon the selling price of the contents.

The handling of direct labor is ordinarily simple. This situation exists in the jewelry industry. Direct labor is an element of cost which is directly variable with production and is easily apportioned to the product resulting from the labor. About the only aspect of the direct labor portion of cost which can create any difficulty is the charge for set-up time of tools, dies, and jigs. This is properly considered direct labor and should be charged to the product for which the machine is set up except where set-up cost is insignificant in amount or where the set-up cost applies to more than one product.

Manufacturing expense, referred to as burden or overhead, has always been clouded with an air of mystery. Cost accounting is

recognizing that more and more items commonly considered overhead are directly chargeable to a particular product and that in the case of fewer and fewer items is it necessary to use arbitrary methods of apportionment. Every item of manufacturing expense should be charged to the product benefited wherever it is possible to determine the amount at a reasonable cost. In the group of expenses chargeable direct to product, we find royalties paid for designs, supplies consumed and similar items. The group of manufacturing expenses which it is not possible to charge direct to the product is made up largely of fixed expenses arising from machine and organization costs. These must be apportioned to the product upon a more or less arbitrary basis. In this apportionment, the accountant always seeks to find some basis to which the manufacturing expense bears a relationship. If he can find what it is that causes the burden items to increase or decrease, he has generally found the best possible basis for apportioning the expense to the product. The apportionment should always be by item rather than by totals.

The handling of expense items involves several steps. The amounts of each class of expense are accumulated in primary expense accounts and thence distributed upon some equitable basis to all departments, including service departments. The cost of various services (such as power, heat and storage costs) are then distributed to the various productive departments benefiting from their services. At that point the total overhead has been charged to the productive departments and the only remaining step is to charge the product passing through each productive department. Several methods are available for this purpose. One of the simplest and one which is common in the jewelry industry is to charge the product in proportion to the hours of direct labor spent upon that product. This requires an estimate of the probable number of labor hours to be worked during the year and the division of this total into the estimated manufacturing expense for the same period. This method has a considerable number of advantages over the so-called prime cost method which is used quite extensively in the industry. Under the prime cost method, burden is charged in proportion to the total of material and direct labor costs. The amount of burden, however, seems to bear no particular relation to the

cost of material but is more nearly proportional to the hours of direct labor. So to charge one product with more burden merely because the price of material used has gone up, would hardly seem to be justified. Likewise to charge one of two products involving the same amount of direct labor with twice as much burden merely because it contained greater weight of metal, would seem to be illogical.

The distinction between cost to make and cost to sell is an important one. Everything that is included in the cost to make will automatically become part of the inventory value of goods on hand unsold while expense elements included in cost to sell will be charged to profit and loss even if no goods are sold. Cost to sell must be met out of the gross margin, while cost to make determines the gross margin available for selling costs and profit.

Cost to sell includes all expense incurred in distributing the product. Salesmen's compensation and traveling expense, while an important part of selling expense, are only two of many items properly included. Some of the types of expense making up the group of costs are listed below:

(1) Salesmen's compensation.
(2) Traveling expense.
(3) Sample line expense.
    (a) Depreciation, repairs, etc., on equipment.
    (b) Supplies.
    (c) Insurance.
(4) Allowance for loss on samples.
(5) Advertising of all types.
(6) Stock room expense.
(7) Packing and shipping supplies.
(8) Packing and shipping salaries and labor.
(9) Transportation expense.
(10) Bad debts.
(11) Discounts allowed.
(12) Allowances for cuts, inserts and advertisements.
(13) Pro-rata part of financial expense.
(14) Entertainment of customers.
(15) Gratuities.
(16) Pro-rata share of administrative expense.

A significant trend in industrial accounting is the increasing application of cost analysis to distribution expense. Recently a manufacturing jeweler who had previously kept only total selling costs, made an analysis of his selling costs by territories and found that costs varied from 6% to 22% of sales. This concern had been marking its goods up 10% to cover selling costs and 10% for profit; it was therefore actually losing money in one territory and earning much less than the desired return in two others. Progressive organizations are realizing the inadequacy of knowing merely total selling costs and are developing records and techniques of analysis which produce selling costs by territories and by different types of distributing outlets. Some concerns are determining the cost of distribution for every type of product sold.

The unsatisfactory conditions generally existing among manufacturing jewelers have already been pointed out with the statement that less than 20% of the companies surveyed kept any records of quantities sold by products. Methods of distribution in this industry have been undergoing constant change and new policies have been adopted without adequate realization of costs involved. Additional sales volume has been sought with decreasing returns. New territories have been developed and new sales outlets sought without a careful checking of the increased revenues against the cost of obtaining it.

Narrow margins and keen competition are the order of the day. Any enterprise which hopes to continue to operate at a profit must base its policies upon facts and must maintain records which will reveal the costs to sell in such a way that distribution activities may be developed intelligently. Basic records should be kept which will make possible the analysis of sales according to one or more of the following bases:

(1) By territories
(2) By types of distributors
(3) By types of products
(4) By size of annual sales.

The installation of sales accounting records requires considerable study and some expense. maintenance of such records once

started requires a negligible amount of time and should not necessitate any additional clerical help. Proper sales records should

(1) Reveal the profitableness or unprofitableness of selling territories, types of sales outlets, and items of merchandise,

(2 Provide a basis for control of sales cost,

(3) Furnish a basis for measuring the financial desirability of increased volume,

(4) Furnish facts on which sales policies may be formulated.

The enormous inventory losses suffered by most business in 1920-21 was the source of a movement towards closer inventory control. A direct consequence has been hand-to-mouth buying with a continuous decline in the size of orders placed by retailers and wholesalers. In the jewelry industry the range of size of average orders is from $31 for the small business to $81 in the largest size group. Inasmuch as these figures are average figures, a great many orders are received which are materially lower than the average figures. The effect of these small orders on the manufacturer has been to increase both the cost to make and the cost to sell. In production the result has been caused by decreasing manufacturing lot sizes. In the distribution end of the business, a small order has to go through the same routine as a large order with no appreciable difference in the cost of handling. The clerical work of opening, entering, ordering, receiving, checking, billing, packing and shipping of a small order is almost the same for all orders, irrespective of size. Storage costs may actually be increased because of the necessity of carrying stocks in order to avoid the high cost of small production lots.

In order to place the costs of small orders on the purchaser, manufacturers are using various methods. Two of the most common are the service charge and quantity price adjustments. Under the service charge method the customer is billed for a fixed handling charge on all orders below a specified amount. Prices are quoted in terms of a dozen, hundred, gross, etc., and for quantities less than the unit used, prices are quoted ranging from 5% to 20% above the base price. For quantities greater than the normal unit, discounts are sometimes allowed. Either of these methods,

if they are to be sound, must be based on correct information as to the cost of handling orders. Even if changes in price policy are not possible, the manufacturer will learn some illuminating, if not encouraging information, if he will make an analysis of the distribution of order size and the costs of handling the various sizes. Upon the basis of such analysis, manufacturers in other industries are finding it profitable to refuse a considerable number of orders.

The jewelry industry is burdened with a number of practices instituted as a service to customers and eventually resulting in higher costs of distribution. Among these are free repairs, liberal returned goods policies, extra terms, and allowances for cuts, catalogue inserts, etc. Recognition of the cost of these practices would do much towards reducing or eliminating them. Thus the manufacturer who does not charge for repairs or for inserts must either cover himself in figuring the cost of distribution or else take the cost of such repairs out of his net profit.

As an assistance to the manufacturing jeweler in adopting and using sound cost methods the Survey Committee of the New England Manufacturing Jewelers' and Silversmiths' Association included in its report and recommendations a form of cost card designed to summarize the principles of cost to make and cost to sell. This card is reproduced by permission, as Form I. This cost card provides for the accumulation of all elements of cost and for the determination of a selling price based on such costs. The use of this cost card presupposes that the manufacturer can

(1) Determine by the use of job tickets and material requisitions, direct labor and material chargeable to the job,

(2) Estimate his overhead and select a proportional basis for allocating the overhead to his product,

(3) Estimate his sales volume,

(4) Predetermine what will be his cost to sell.

One of the reasons for unsatisfactory cost conditions in the industry was found to be the prevalence of poorly selected and incomplete account classification. Good costing requires an account classification in some detail as a basis for equitable allocations. A fairly complete account classification will not add much

Front of Card

COST CARD

ARTICLE

CATALOGUE NO. COST PER

1 DIRECT LABOR

Operation	Time Hr.	Time Min.	Rt. Per Hr.	Rt. Per Min.	Cost	Amt.

2 RAW MATERIAL

Type and Specifications	Purchased From	Weight Lb.	Weight Unit	Unit Price	Cost	Amt.

Material Issued

Less—Value of Material Borrowed

Material Used

3 PARTS AND SEMI-FINISH MATERIAL PURCHASED

Description	Purchased From	Quantity	Unit Price	Cost	Amt.

Add ..... % for Loss, Breakage, Defects, Etc.

Parts and Semi-Finish Material Used

4 OUTSIDE LABOR

Description of Work	Performed By	Quantity	Unit Price	Cost	Amt.

Add ..... % for Overhead, Loss, Etc.

Outside Labor Cost

Back of Card

5 SELLING PRICE OF DISPLAY CASES, BOXES, ETC.

Description	Purchased From	Unit	Unit Cost	Amount

Total Cost of Cases

Add ..... % to Cover Selling Costs, Losses, Etc.

Selling Price of Cases

Remarks:

6 COST SUMMARY PER .....

Raw Material		
Parts and Semi-Finished Material		
Outside Labor		
Direct Labor		
Manufacturing Overhead:		
(Base @ Rate)		
Total Cost to Make		
Selling Cost ..... % of S. Price		
Net Profit ..... % of S. Price		
Gross Profit ..... % of S. Price		
(Selling Price–Gross Profit=Cost to Make)		
100% — ..... % = ... %		
Selling Price Per		
Selling Price Each $		

7 SELLING PRICE CASED

Quantity in Case ..... @ $

Selling Price of Case

Total Selling Price of ..... Gross

FORM 1

to the ledger but will provide an automatic analysis of primary transactions. Once the primary record is made, further analysis can be accomplished only by an increased expenditure of time and money.

The manufacturing jewelers have been badly handicapped by insufficient and inaccurate information about their businesses. If they are to remedy unsatisfactory conditions they must know the facts as to manufacturing costs and cost to sell. Upon such information as a basis they can then proceed to determine upon sound manufacturing and distribution policies, and to eliminate unsound practices. Improved profits will inevitably result.

SPEEDING UP THE PREPARATION OF FINANCIAL STATEMENTS

By William B. Knuff, Chief Cost Accountant, Central Alloy Steel Co.

PRESENT day price levels demand prompt action from the Accounting Department, to permit a prompt analysis of costs, sales and inventories as soon after the close of the month as possible. Therefore it is up to the accounting department to devise ways and means of bringing about early figures, which can be accomplished by a little thought and effort.

Early figures, which make it possible to submit cost data as early as the 3rd to the 8th day following the month of production, have a tendency to create an enthusiasm among department heads that reflects advantageously in their departmental costs. This, above all other advantages, is what helps the profit and loss results, and spells real dollars in the treasury.

If the manufacturing end (operating department) of business spends ninety cents out of every dollar spent by the business as a whole, isn't it reasonable to assume that the first source of analysis should be that end? And at that end are the product cost and departmental costs, whether they be service departments, auxiliary producing departments or producing departments. It is just as important to eliminate waste and excess costs in the production of service charges, such as electric light, water, steam, air, etc., as it is in the producing center.

Again, it is the accounting department which should compile reports that are a help to management, and not a lot of unwieldy reports that reflect such data as the usual accounting preciseness demands. A cost sheet which reflects unit costs four, five or six places beyond the decimal point, is the kind of report that discourages cost interests, and should be discontinued. If necessary, increase the size of the unit of production and reflect a cost in dollars and cents, or two places beyond the decimal point. The size of a cost sheet is also a factor in bringing about early figures. Cost sheets that are conveniently handled for posting, etc., naturally speed up the results.

Standardizing on form sizes facilitates the compilation of reports, as well as the typing and filing of such reports. We have recently changed all of our cost sheet forms from 11" x 17" to 8½" x 14", the change effecting a reduction in the cost of forms to the extent of 35% to 40%, a reduction in the time of typing and dittoing of approximately 25%, and above all, the convenience in handling a cost portfolio of an 8½" x 14" size as compared to a 11" x 17"—brief case size—permits our busy executives to utilize their travel time in digesting costs, which naturally leads to better and more efficient management.

Operating heads prefer brief and concise reports. Even dollars and only two places beyond the decimal point is satisfactory for exhibiting the cost of a unit, in most cases.

Accountants have accomplished a whole lot in recent years towards making the operating heads "accounting minded," and this has been done by the contact existing between the cost man and the operator, which relationship is on the increase, for the good of all.

Just recently a request came in for a cost man to take part in a skit put on by a Foremen's group, and the specifications were: "a square-jawed cost man, but not a sissy." This request explains the relationship that still exists between the accountants and operating men, at least in some quarters, and we must put forth our best efforts to eradicate this condition.

At the present time, we are closing our books monthly on about noon of the 5th working day, and we know that this will be reduced a day as soon as possible.

Our corporation includes blast furnaces, coke plants, steel mills,

ore mines and coal mines, tube mills and sheet mills in several states, and as far south as Birmingham, Alabama. Our closing date for the month is noon of the fifth day, which means that all closing entries must be in the auditor's office at that time, and I am here to say that they are in at the scheduled time.

Of course, this permits our executives to know the profit and loss results, etc., for the preceding month on the 5th day of the current month, but above all, it permits our cost department to spread the cost data as early as the 3rd day, and not later than the 8th or 9th day for the finals. These costs represent comparative figures of all similar producing units in the corporation, and consist of approximately 50 statements of the 8½" x 14" size, comprising approximately 12,500 items of cost and statistical data, in order to properly measure the operating results of our corporation. These costs are spread to all districts of the corporation, and are further analyzed and discussed at the monthly district managers' meetings usually held about the 10th to the 13th of each month.

From this, you can see that leaks not detected from our daily labor and material controls are uncovered as early as the 3rd to the 9th day of the month succeeding the month of production.

Early figures permit us to make early analyses of our sales, inventories, construction accounts, operating reserves, etc. Prompt billing and prompt monthly statements of accounts receivable accounts are also the result of prompt closing.

Our production, payroll, stores and raw materials ledgers, are closed as of 11:00 p.m. to 12:00 Midnight on the last day of each month. Our receipts of raw materials and supplies include receipts up to midnight of the last day. Any material received after the 27th or 28th of the month is set up as a liability, and charged to inventory.

Before the balance sheet, profit and loss statement, and other financial statements can be prepared, the following accounting procedures are necessary:

1—Closing of the payroll record and labor distribution, the latter usually completed by noon of 2nd day.

2—Closing of stores records and the monthly distribution of stores, material, and supplies.

3—Closing of raw materials inventory records and the distribution of material other than stores.

4—Closing of production records and the verification of product inventories.

5—Summarization and classification of all product shipments made during the month.

6—Distribution and redistribution of service departments, auxiliary producing departments, etc., to producing departments.

7—Determining the cost of sales value of all products shipped during the calendar month.

8—Compiling the gross profit and loss statement.

9—Closing journal entries to the general ledgers of the corporation.

(All of this accomplished by noon of the 5th working day)

10—Compiling the general financial statements.

After giving the speeding up of the principal jobs (as enumerated above) considerable thought, in order to effect early financial statements, we developed the following:

1—*Uniform card of accounts*

We issued a card of Accounts, which provided for strict uniformity in all of our manufacturing accounting. A code number was provided for each account, to permit the use of mechanical tabulating.

By this method, we eliminate descriptive accounts on our recapitulations of labor, stores and inventory accounts, as the code numbers are used when tabulating by hand or machine.

Each manufacturing ledger control account, as well as each producing center, auxiliary producing center or service department or service shop is given a prefix number of three digits.

Then account numbers consisting of three digits were provided for the various sub-accounts, inventory accounts and operating expenses, all of which are prefixed by either the control number or department number.

The operating expense accounts, regardless of the department, carry the same account number for similar items of costs. This simplifies matters in our distribution de-

partments, and makes memorizing of the account numbers simple, which naturally speeds up our expense distributions.

Code numbers were established for all inventory accounts of the corporation, which effected strict uniformity in all plants, and simplified the monthly comparative inventory statement, and effected true comparisons without much difficulty. Strict uniformity in the detailed monthly inventory statement as submitted by each district, also exists.

In our steel plants several shapes and sizes of steel are made; and as we make alloy steel, we produce many different grades of steel. To simplify the coding of these products, we set up a "size classification" for the several shapes and sizes, and a "grade classification" for the various grades of steel. The grade classification, prefixed by the size classification digits, comprise the account number.

When it is all said and done, the nucleous for correct costs, departmental or product costs, is a card of accounts that creates correct expense distribution.

When the mechanics of our accounting methods are fully explained in a card of accounts, correct costs are usually the result.

2—*Schedule for monthly closing*

The prompt dispatching of daily accounting reports during the month, and especially at the end of the month, which eliminates peak conditions at any time during the month, is an important factor in early closing. We deem it just as necessary to schedule our accounting departments as it is to schedule our mills.

By carefully planned schedules of all work pertaining to our closing, and a *strict adherence to the schedules* as set up, thereby synchronizing our various accounting activities, we reduce lost time to a minimum in all clerical departments.

Special attention is given to departments where the schedule is not adhered to, and corrections are made.

The schedule for monthly closing is arranged departmentally, and the specific day and hour of the time the report is to be furnished is indicated. For example:

"At 2:30 p.m. on the second day of the month, the distribution will furnish the cost department with cost sheets, which will include the labor and stores distribution, properly balanced with the controls."

The responsibility for data received by the distribution department to carry out the above schedule, rests with them, and no alibis are accepted.

This same rule applies to all departments scheduled, and when information is received from other than accounting departments, the same rule applies. Of course we cannot be weak-kneed accountants to carry out such schedules, and we must insist upon them.

3—*Centralized district accounting*

By centralizing district accounting, peak conditions can be eliminated by the transfer of clerical help from one department to another, especially during the closing period, thereby eliminating peaks, without addition to force, which also increases the office efficiency.

From information available, we have determined that as much as 25% of the help required at closing time was received from other departments.

4—*The use of proper mechanical equipment*

From tests made, we determined the proper mechanical equipment applicable to our needs and insisted on the use of this equipment.

5—*Elimination of duplicated effort*

By placing data on final reports as far as possible, we avoid further copying, and the elimination of duplication and possible errors.

6—*Anticipating data available before the first day*

Data such as engineering factors, shop factors, special payroll distributions, steam, water, electric power and air factors, for distributing these service expenses, can be made available on the first day of closing.

Also, we skeletonize, in advance, several months' supply of reports, vouchers, statements, etc., on the typewriter, to avoid as much hand work as possible.

7—*Trained operators on mechanical equipment*

We use trained operators on mechanical equipment for the necessary straight calculations, consisting of prorating of distributions, etc., cross footing and balancing.

8—*Coordinated department effort*

We train the organization for other than specific duties, thereby reducing delays due to absentees.

9—*Reciprocity*

We realize the importance of the cost and accounting departments serving the operating and other departments 100% to accomplish a reciprocity arrangement. Records should be available at all times to those entitled to them, and the motto of the cost department particularly, should be "Ready to serve at all hours."

10—*Mechanical Tabulating*

By the use of mechanical tabulating equipment on payroll, labor distribution, stores distribution, production and sales classification, we reduce materially a peak condition, which would exist on a hand tabulating basis. This, we believe, is a very prominent factor in effecting early closing.

Other advantages gained by the use of this equipment are the many combinations of data requested, that can be furnished if properly anticipated, which would be prohibitive on a hand basis.

11—*Check figure "11"*

By the use of the check figure "11" in posting to inventory and cost ledgers, we eliminate looking for balances at least 95%.

We believe that the check figure can be used as rapidly as the placing of a check mark, and at the same time, each posting is verified as it is made.

12—*Desk arrangement and office layout*

By the proper grouping of departments and desk arrangement, lost motion can be reduced.

13—*Accuracy*

By considering the importance of accuracy, and training the help accordingly, we prevent lost time in correcting errors, and create confidence in the figures submitted.

14—*Management support*

Above all, we must have 100% support from our management in all of our early closing activity, which automatically creates coordination of all others involved in early figures. Early figures are demanded by "cost minded executives," who invariably are the successful ones.

Advantages of Early Figures

1—*A necessity to good management*

The knowledge of the operation and sales results early, is a necessity to good management, to correct as soon as possible any faulty operation or sales policies that prove detrimental to business.

2—*On manufacturing costs*

Early figures, instead of historical facts, create cost interest among the cost-making department heads. By the rendition of departmental costs and statistics on the 3rd to the 9th day, instead of the old basis of about the 15th to the 25th day, the department heads have the results of their efforts while they are still fresh in their minds, permitting them to correct waste and inefficiency that much earlier, thereby benefiting their current month's operations.

We issue, monthly, approximately 1,300 cost and exhibit sheets, comprising all of our operations in the corporation, which are spread to all concerned in the various districts, and which are received in our general offices on or before the 13th of each month.

These costs are further details of the comparative costs referred to above, and are used for further analyzing the cost of specific products and departments, thereby making available any cost analysis that may be requested, as early as the 13th of the month following production.

3—*Inventory control*

Inventory of raw materials, supplies, process and finished products data is available for early analysis by the early closing method. This sometimes prevents excess purchasing of raw materials and supplies.

In addition to the monthly detailed inventory, which includes quantity, price and value of each item carried in the respective districts, which also reflects the increase or decrease by items over the previous month, a comparative inventory report is also issued about the 8th of each month, which shows the comparison in values only by districts. This statement reflects the various group totals only, such as ore, iron and steel scrap, ferrous metals, fuels, fluxes, refractories, rolls, etc., stores, semi-finished and finished products.

4—*Effect on the office organization*

By early closing we have accomplished appreciable reductions in our clerical force. This we can attribute to increased efficiency, due to the elimination of peak conditions, by the transfer of help from one department to another, as much as it is consistently possible, and the sustained effort for 4 or 5 days that could not be maintained for a longer period.

In spite of 1 to 4 nights' overtime being required in our cost departments, which is brought about by the increased volume due to closing, and which is done at no extra compensation, the morale of the organization is such that frequently our help voluntarily report for work on a Sunday when the Sunday is included in the first five days of the month, although our offices are closed on all Sundays. This can be attributed to the interest taken by the individuals to break records.

The satisfaction of presenting early figures without delay is also an advantage of early closing, which is a large factor in maintaining a satisfied and efficient organization, by the fact that current work is started early in the month, and peaks brought about by a longer closing period are eliminated.

Early closing also makes it possible for a more thorough analysis of other reports issued, which would be rushed through on account of lack of time, without early closing.

5—*Billing to customers and monthly statements to customers*

Early closing advances billing to customers and the issuance of monthly statements, which improves collections.

6—*Increased cost activity*

Early figures increase materially the interest in cost reductions, by the fact that information is more readily available, and if for no other reason than this, we believe the activity is well worth the effort it requires, to say nothing of the necessity, especially in this period of sub-normal production.

CLOSING

When we recognize the many advantages and benefits derived, in addition to early costs, early analysis of sales and inventories, prompt billing, all this in spite of force reduction, "Early Closing" should be the thought of today.

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